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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/600,338

Applicant(s)

CHOI, SEUNG YOUNG

Examiner

Yixing Qin

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

The replacement drawings were received on 11/5/07. These drawings are accepted and entered.

Response to Arguments

Applicant's arguments filed 7/13/07 have been fully considered but they are not persuasive. The applicant's main argument is that the now claimed invention is a display-free printing unit and that the previously cited reference, Sekikawa, performs the image processing on an image that is displayed on a screen of the control panel of the printer. While the Examiner acknowledges that the image is seen in a different screen (i.e. either a computer monitor or a screen of the control panel of a printer), the applicant's admitted prior art in the background of the invention poses two different setups in P[0004] and P[0005], where either a computer monitor or a control panel LCD can display images for processing and printing. Sekikawa's invention is a printer attached to a computer, where the computer is able to command the printer through a printer driver (Sekikawa – column 5, lines 24-42). Thus, Sekikawa's invention can easily be adapted to perform the displaying/processing of images on the computer's monitor as suggested by P[0005] of the applicant's background since the computer is controlling the printer through the printer driver anyways. The Examiner also acknowledges that P[0005] refers to a printer without a LCD, but having a printer with a LCD does not take away the ability to display images on a monitor of a computer

attached to the printer. The printer in Sekikawa is a display-free printer with additional functionality, which in this case happens to be a control panel display and capability to process images on the display. Thus, one of ordinary skill can simply "dumb down" the printer of Sekikawa and remove the display part to instead use the monitor's display, or simply choose not to use the display mechanism of the printer.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

I. Claims 1-6, 8-14, 16-20 rejected under 35 U.S.C. 103(a) as being unpatentable over Sekikawa (U.S. Patent No. 6,498,658) in view of the applicant's admitted prior art in the background of the invention ("Background")

Regarding claim 1, Sekikawa discloses a method of printing an image using an display-free image printing unit, which prints an image corresponding to image data read from an external memory card, and a personal computer, which is connectable to the display-free image printing unit, the method comprising:

checking for or generating compressed image data from the external memory card in the display-free image printing unit; transmitting the compressed image data to

the personal computer together with an image number; (column 19, lines 39-44 – this shows that compressed image data is transferred. Figs. 20A-G shows how a compressed image data is identified. One can see that the header includes an ID number)

storing the compressed image data and the image number transmitted from the display-free image printing unit in the personal computer; (column 19, lines 39-44 – the data is received from the digital copier by the personal computer – it would be inherent that this data is stored in the personal computer)

displaying by the personal computer the image data transmitted from the display-free image printing unit; (column 19, lines 50-53) and

It does not explicitly disclose “printing at the display-free image printing unit the displayed image data in response to a user print request at the display-free image printing unit.”

However, Sekikawa discloses in Figs. 15-16 that images can be printed using the printer's control panel. So it is entirely possible to view the images on the display of the personal computer, while instructing to print from the printer's control panel.

Also, from the arguments above, the Sekikawa reference does not disclose a display-free printing unit. But, using either a printing unit with a display or without a display does not take away the ability for the system to work, where images can be displayed on a monitor instead as show by P[0005] of the Background. Please refer back to the arguments above for a more detail explanation.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used the Sekikawa teachings to obtain the claimed invention.

The motivation would have been to allow an user to use a bigger monitor on a personal computer to see images, while still being able to print them at a printer.

Therefore, it would have been use Sekikawa to obtain the invention as specified.

Regarding claim 2, Sekikawa discloses the method of claim 1, further comprising:
determining whether the memory card with the image data has been inserted into the display-free image printing unit and whether the display-free image printing unit has been connected to the personal computer, (Fig. 4A shows memory card connection. While not explicitly stated, one can see from Fig. 1 that the digital copier is connected to the personal computer through the serial or parallel interface. It would be inherent to know whether the personal computer was connected.)

wherein the compressed image data is checked for or generated upon the determining of insertion of the memory card into the display-free image printing unit and connection of the display-free image printing unit to the personal computer. (column 12, lines 15-56, note especially lines 49-56.)

Regarding claim 3, Sekikawa discloses the method of claim 1, wherein if the user does not request to print the displayed

image data, the displaying of the image data at the personal computer continues.

(column 19, lines 45-57)

Regarding claim 4, Sekikawa discloses the method of claim 2, wherein the determining comprises:

determining whether data stored in the memory card is the image data, if determined that the memory card has been inserted into the image printing unit; (column 12, lines 17-24 – the image is displayed when the memory card is inserted, meaning there is some determination that there is image data to be displayed) and

determining whether the display-free image printing unit has been connected to the personal computer, if determined that the data stored in the memory card is the image data. (Again, while not explicitly stated, one can see from Fig. 1 that the digital copier is connected to the personal computer through the serial or parallel interface. It would be inherent to know whether the digital copier was connected to the personal computer.)

Regarding claim 5, Sekikawa discloses the method of claim 1, wherein the checking for or the generating of the compressed data comprises:

determining whether the image data read from the memory card includes compressed image data; (column 12, lines 41-56 – from these lines, the printer would

have to know that the data is not compressed since it compresses the images to produce the reduced images) and

compressing the image data, if determined that the image data read from the memory card does not include the compressed image data. (column 12, lines 41-56)

Regarding claim 6, Sekikawa discloses the method of claim 1, wherein the displaying of the image data comprises:

reading by the personal computer the image data corresponding to a user selected image number at the display-free image printing unit and transmitted from the display-free image printing unit to the personal computer; (column 20, lines 45-57 – although Sekikawa discloses that the user selects the image on the computer, one can see from Figs. 15 and 16 that images can be selected on the digital copier as well) and displaying the read image data. (column 20, lines 50-57)

Regarding claim 8, Sekikawa discloses the method of claim 6, wherein the displaying of the image data further comprises:

transmitting the user selected image number to the personal computer, if the personal computer is ready to receive a new image number; (column 19, lines 45-57). and

reading by the personal computer the image data corresponding to the user selected image number provided from the image printing unit. (column 19, lines 45-57).

Regarding claim 9, Sekikawa discloses the method of claim 1, wherein the personal computer includes a monitor, and the image data is displayed in a predetermined size at a predetermined position on the monitor. (column 19, lines 45-57).

Regarding claim 10, Sekikawa discloses the method of claim 1, wherein the image data is displayed according to a variable size at a variable position. (column 19, lines 45-57 – although Sekikawa discloses using a reduced image, the size of the reduced image can be altered in known ways, and would be obvious to place the image in any suitable display position on a monitor).

Regarding claim 11, Sekikawa discloses the method of claim 9, wherein the predetermined size occupies a part of a screen of the monitor. (column 19, lines 45-57 – it is inherent that the display of an icon would occupy a part of the screen).

Regarding claim 12, Sekikawa discloses the method of claim 1, wherein the printing of the image data comprises:

reading at the display-free image printing unit the displayed image data from the memory card in response to the user print request; (column 19, lines 53-57).

image processing the read image data; (column 4, lines 8-10) and

printing the image-processed image data. (column 19, lines 53-57).

Regarding claim 13, Sekikawa discloses a computer system printing an image using an image printing unit, which prints an image corresponding to image data read from an external memory card, and a personal computer with a monitor which is connectable to the image printing unit, (Fig. 1)

the display-free image printing unit comprising:

a print preparing section determining whether the memory card with the image data has been inserted into the display-free image printing unit and whether the display-free image printing unit has been connected to the personal computer, and outputting a determination result as a control signal; (Fig. 4A and from claim 2 above, one can see from Fig. 1 that the digital copier is connected to the personal computer through the serial or parallel interface. It would be inherent to know whether the personal computer was connected.)

a data processor processing the image data read from the memory card, checking for or generating compressed image data in response to the control signal, and transmitting the compressed image data to the personal computer together with an image number; (column 12, lines 41-56, Fig. 20A-G)

a key operating section operated by a user to select the image number and outputting a print request signal requesting to print the image data corresponding to the user selected image number; (Figs. 15, 16) and

a printing section printing the image-processed image data received from the data processor in response to the print request signal, (Fig. 1, item 121)

the personal computer comprising:

a storage storing the compressed image data and the image number transmitted from the data processor; (column 19, lines 45-57 – again, it would be inherent for the computer to store the received image data) and

a display controller reading, from the storage, the image data corresponding to the user selected image number at the display-free image printing unit and displaying the read image data on the monitor. (column 19, lines 45-57)

Again, please refer to the response to arguments and claim 1 for more detail regarding the point of view of the examiner on the display-free printing unit.

Regarding claim 14, Sekikawa discloses the apparatus of claim 13, wherein the print preparing section comprises:

a sensor sensing whether the memory card has been inserted and outputting a sensing result; (Fig. 4A)

a first data detector detecting a type of data read from the memory card in response to the sensing result; and (column 12, lines 47-56)

a connection checker checking whether the personal computer has been connected to the display-free image printing unit in response to a detection result received from the first data detector and outputting a connection check control signal. (one can see from Fig. 1 that the digital copier is connected to the personal computer

through the serial or parallel interface. It would be inherent to know whether the personal computer was connected. Although Sekikawa just discloses what happens and does not explicitly give part names, the functions of the various claimed parts are disclosed by Sekikawa and would be easily implemented in a sensor or detector of some kind)

Regarding claim 16, Sekikawa discloses the apparatus of claim 13, wherein the display controller comprises a data reader reading, from the storage, the image data corresponding to the user selected image number, which is generated in the key operating section and transmitted from the image printing unit, and outputting the read image data to the monitor for the displaying. (column 19, lines 45-57)

Regarding claim 17, Sekikawa discloses the apparatus of claim 13, wherein the display controller comprises: a position/size determiner determining a position at which the read image data is to be displayed on the monitor and a size of the read image data to be displayed, and the monitor displays the read image data according to the determined size at the determined position. (While not explicitly disclosed, the display controller for the personal computer would work similar to the display controller of the digital copier in that it will identify an appropriate position and size for an image, like that of Figs. 15 and 16).

Regarding claim 18, Sekikawa discloses the apparatus of claim 17, wherein the position/size determiner varies the display position and size of the image data and outputs the varied results to the monitor. (column 19, lines 45-57 – although Sekikawa discloses using a reduced image, the size of the reduced image can be altered in known ways, and would be obvious to place the image in any suitable display position on a monitor)

II. Claim 7 rejected under 35 U.S.C. 103(a) as being unpatentable over Sekikawa (U.S. Patent No. 6,498,658) in view of the applicant's admitted prior art in the background of the invention ("Background") and further in view of Bubie et al (U.S. Patent No. 6,453,078)

Regarding claim 7, the Sekikawa reference discloses printing images from a memory card.

It does not explicitly disclose "wherein the reading of the image data comprises: ignoring the image number provided from the display-free image printing unit as a last image number, if a previous image data is being displayed; and reading the image data corresponding to the last image number after the previous image data is completely displayed."

However, Bubie et al discloses in column 1, lines 45-60 that prior art techniques are known to display one image at a time. Slideshows, especially, display only one

image at a time (i.e. the previous image), with the next image being ignored until the current image is displayed for a set period of time.

All references are combinable because they are in the art of printing images efficiently.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used a display mechanism such as a slideshow to display only pertinent images.

The motivation would have been to allow users to focus on one image at a time if that image is deemed to be important.

Therefore, it would have been obvious to combine all references to obtain the invention as specified.

III. Claim 15 rejected under 35 U.S.C. 103(a) as being unpatentable over Sekikawa (U.S. Patent No. 6,498,658) in view of the applicant's admitted prior art in the background of the invention ("Background") and further in view of Official Notice.

Regarding claim 15, Sekikawa discloses the apparatus of claim 13, wherein the data processor comprises:

a second data detector detecting whether the image data read from the memory card includes the compressed image data in response to the control signal; (column 12, lines 47-56 – the determination would be that the image data is not compressed, since it goes on to compress the data to create a reduced image)

a data compressor compressing the image data read from the memory card in response to a detection result received from the second data detector; (column 3, line 66- column 4, line 7)

an image number generator generating the image number to be uniquely allocated to the image data read from the memory card; (Figs. 20A-G)

a data transmitter transmitting the compressed image data received from the memory card or from the data compressor to the personal computer together with the generated image number received from the image number generator, in response to the detection result received from the second data detector, and transmitting the user selected image number received from the key operating section to the personal computer; (column 20, lines 45-57 – although Sekikawa discloses that the user selects the image on the computer, one can see from Figs. 15 and 16 that images can be selected on the digital copier as well) and

Sekikawa does not explicitly disclose “a format converter converting an RGB format of the image data read from the memory card into a CMYK format and outputting the image data having the CMYK format to the printing section.”

However, RGB and CMYK formats are well known in the art of printing.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used conventional color representation of images.

The motivation would have been to have compatibility when printing images.

Therefore, it would have been obvious to use known color spaces in the Sekikawa reference to obtain the invention as specified.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yixing Qin whose telephone number is (571)272-7381. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler Lamb can be reached on (571)272-7406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

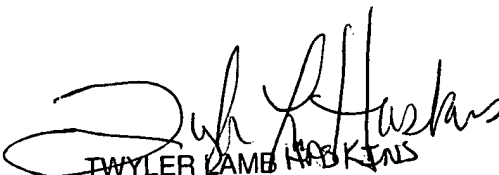
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